

## WHAT IS CLAIMED IS:

1           1. A method of expressing a movement of a crowd made up  
2 of a plurality of individuals in an information processing  
3 apparatus, said method comprising the steps of:

4           obtaining the number of individuals which form a crowd at  
5 time  $t$  and the position of each individual, and assigning a  
6 position to each individual in the crowd at the next time  $t + 1$  in  
7 accordance with a predetermined arrangement rule;

8           determining a destination direction with regard to a  
9 reference point of the crowd, determined by the positions of the  
10 individuals which form the crowd at time  $t$ ; and

11          determining the position at the next time  $t + 1$  according to  
12 the position assigned by said arrangement process and said  
13 destination direction.

1           2. A program which causes an information processing  
2 apparatus to execute:

3           an arranging process for obtaining the number of  
4 individuals which form a crowd at time  $t$  and the position of each  
5 individual, and assigning a position to each individual in the  
6 crowd at the next time  $t + 1$  in accordance with a predetermined  
7 arrangement rule;



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character should operate as an individual or as a crowd;  
a virtual object creation process for specifying a group of  
characters which form the crowd and creating a virtual object  
which gives movement information about movement to the group  
of characters when it is determined that each character should  
operate as part of a crowd; and  
a crowd movement process for causing the group of  
characters to move on the basis of said movement information.

5. A program according to claim 4, wherein said movement  
information contains information about a character assignment  
position in a virtual space and information about the destination  
direction of the virtual object.

6. A program according to claim 5, which further causes  
said information processing apparatus to execute an operator  
character display process for displaying, on a display screen of  
the display apparatus, a moving image of an operator character  
which moves in a virtual space in accordance with the operation  
of an operator, which is received via an operation apparatus,  
wherein the destination direction of said virtual object is a  
direction in which said operator character in the virtual space is  
chased.

7. A program according to claim 4, which further causes

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said information processing apparatus to execute;

a character movement process for causing a character to move in the virtual space when it is determined in said mode determination process that the character should move as an individual;

a character search process for determining whether or not another character is present within an area of a predetermined range corresponding to the position of the character in the virtual space; and

a crowd forming process for causing the character to act so as to form a crowd together with said other character when it is determined that the other character is present.

8. A program according to claim 5, wherein the character assignment position in said virtual space is a position in one circle or in a plurality of concentric circles, around a reference point determined based on the positions of the group of characters which form a crowd, and the characters in the same circle are evenly spaced apart.

9. A recording medium, readable by said information processing apparatus, having recorded therein said program according to any one of claims 2, 4, 5, 6, 7, and 8.